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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/887,827	06/22/2001	Joseph A. Abys	Abys 52-14-6-6	7859

7590

07/17/2002

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EXAMINER

LEWIS, MONICA

ART UNIT

PAPER NUMBER

2822

DATE MAILED: 07/17/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/887,827

Applicant(s)

ABYS ET AL.

Examiner

Monica Lewis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 June 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This office action is in response to the application filed June 22, 2001.

Election/Restrictions

2. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-6, drawn to a coated metal article, classified in class 257, subclass 677.
 - II. Claims 7-10, drawn to the method for manufacturing a coated metal article, classified in class 438, subclass 758.

Inventions II and I are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)).

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

A telephone call was placed with Glen E. Books on July 5, 2002 which resulted in a provisional election being made without traverse to prosecute a coated metal article, claims 1-6. Affirmation of this election must be made by applicant in replying to this Office action. Claims 7-10 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Drawings

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: a) B and D (See Figure 2); b) a (See Figure 7a); c) b (See Figure 7b); and d) c (See Figure 7c). A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 4 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Shimauchi et al. (U.S. Patent No. 4,959,278).

In regards to claim 1, Shimauchi et al. ("Shimauchi") discloses the following:

a) a metal substrate (See Column 3 Lines 9-15).

b) overlying the substrate a surface finish comprising a layer of tin or tin alloy being in a tensile stress state (See Column 1 Lines 65-68 and Column 2 Line 1).

In regards to claim 4, Shimauchi discloses the following:

a) an underlayer of nickel, nickel alloy, cobalt, cobalt alloy, iron or iron alloy chosen to generate or maintain tensile stress in the layer of tin or tin alloy above the underlayer (See Column 1 Lines 65-68 and Column 2 Line 1).

In regards to claim 5, Shimauchi discloses the following:

a) the tin or tin alloy has a thickness in the range .5 to 10 micrometers (See Column 3 Lines 25-27).

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Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2, 3 and 6 are rejected under 35 U.S.C. 103(a) as obvious over Shimauchi et al. (U.S. Patent No. 4,959,278).

In regards to claim 2, Shimauchi fails to disclose the following:

a) a layer of tin or tin alloy has an average grain size in excess of about 1 micrometer.

However, the applicant has not established the critical nature of the dimension of grain size in excess of about 1 micrometer. "The law is replete with cases in which the difference between the claimed invention and the prior art is some range or other variable within the claims. . . . In such a situation, the applicant must show that the particular range is critical, generally by showing that the claimed range achieves unexpected results relative to the prior art range." *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir.1990).

In regards to claim 3, Shimauchi fails to disclose the following:

a) the average tensile stress is in excess of about 2 MPa.

However, the applicant has not established the critical nature of the dimension of stress which is in excess of about 2 MPa. "The law is replete with cases in which the difference between the claimed invention and the prior art is some range or other variable within the claims. . . . In such a situation, the applicant must show that the particular range is critical, generally by

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showing that the claimed range achieves unexpected results relative to the prior art range.” *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir.1990).

In regards to claim 6, Shimauchi fails to disclose the following:

a) the underlayer has a thickness in the range of 0-20 micrometers.

However, the applicant has not established the critical nature of the dimension of underlayer which has a thickness in the range of 0-20 micrometers. “The law is replete with cases in which the difference between the claimed invention and the prior art is some range or other variable within the claims. . . . In such a situation, the applicant must show that the particular range is critical, generally by showing that the claimed range achieves unexpected results relative to the prior art range.” *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir.1990).

Conclusion

7. The following prior art made of record and not relied upon is considered pertinent to applicant's disclosure: a) Kadija et al. (U.S. Patent No. 4,749,626) discloses a whisker resistant tin coating; b) MacKay (U.S. Patent No. 5,393,573) discloses a method of inhibiting tin whisker growth; c) Labib et al. (U.S. Patent No. 5,426,000) discloses coated reinforcing fibers; d) Zhang (U.S. Patent No. 5,750,017) discloses a tin electroplating process; f) Schonauer et al. (U.S. Patent No. 5,936,307) discloses a surface modification method; g) Rolander et al. (U.S. Patent No. 6,007,909) discloses a cvd coated titanium based carbon nitride; and h) Adams et al. (U.S. Patent No. 6,248,455 B1) discloses an alloy plated sheet steel cured with a thin layer.


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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monica Lewis whose telephone number is 703-305-3743.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead, Jr. can be reached on 703-308-4940. The fax phone number for the organization where this application or proceeding is assigned is 703-308-7722 for regular and after final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

ML

July 11, 2002


CARL WHITEHEAD, JR.
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800